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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,085	05/11/2007	Paul Adams	BIC-027.D1	1674

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THE H.T. THAN LAW GROUP  
WATERFRONT CENTER SUITE 560  
1010 WISCONSIN AVENUE NW  
WASHINGTON, DC 20007

EXAMINER
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TIETJEN, MARINA ANNETTE

ART UNIT	PAPER NUMBER
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3753

NOTIFICATION DATE	DELIVERY MODE
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06/28/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pricilla@htthan.com  
heng@htthan.com  
navid@htthan.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,085	<b>Applicant(s)</b> ADAMS ET AL.	
	<b>Examiner</b> MARINA TIETJEN	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 57-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 57-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/04/2010 has been entered.

### ***Response to Arguments***

2. Applicant's arguments, filed 06/04/2010, with respect to the rejection(s) of claim(s) 57-65 under Deinzer (U.S. Pub. No. 2006/0172171) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lawrence et al. (U.S. Pub. No. 2002/0197522) in view of Dabney et al. (U.S. Pat. No. 3,795,558), as well as DeVos et al. (U.S. Pub. No. 2005/0079128) in view of Dabney et al. (U.S. Pat. No. 3,795,558).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. (U.S. Pub. No. 2002/0197522) in view of Dabney et al. (U.S. Pat. No. 3,795,558).

Lawrence et al. discloses a method for sealing a fuel supply (39a, fig. 10), wherein the fuel supply (39) comprises a valve (88a, 129, 130, fig. 12a), an outer casing (92a) including a first opening (opening through which valve 88a extends), and an inner liner (86a) including a second opening (opening through which valve 88a is fluidly connected to), the method comprising the steps of:

inserting the valve (88a, 129, 130) of the fuel supply (39a) into the second opening of the inner liner (86a);

attaching the valve (88a, 129, 130) to the inner liner (86a);

securing the inner liner (86a) and valve to the outer casing (92a);

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attaching the valve (88a) to the outer casing (92a) [The valve is attached to the inner liner which is attached to the outer casing; also, the liner and valve are somewhat retained loosely simply by passing through the opening in the outer casing and being held there by the pressure of 87a on the liner 86a, and thereby 87a indirectly secure the inner liner and valve to the outer casing. Furthermore, Lawrence shows the valve, liner, and outer casing assembled as a single unit 39. Even if he does not disclose the details of how each is directly attached to each other, they are all indirectly attached in some manner to each other to form the complete unit 39.];

rendering the inner liner fuel-resistant [para. 0075, liner 86 is substantially impervious to methanol, thereby indicating it has been rendered fuel-resistant, whether it is an inherent property of the material used or by a separate process performed to the material], wherein the inner liner is fabricated from polyethylene (para. 0075); and wherein the fuel is methanol.

However, Lawrence does not disclose wherein the valve is attached to the inner liner by ultrasonic welding and wherein the valve is attached by heat to the outer casing by ultrasonic welding.

Dabney et al. teach the use of ultrasonic energy for sealing two plastic rigid members together (such as the valve and outer casing) is known in the art and would have been within the technical grasp of a person having ordinary skill to pursue as a means for permanently attaching the valve to the outer casing to provide a secure and hermetic attachment (that would deter inadvertent tampering or misuse of the fuel contained within Lawrence's fuel cell), and further teach a method for connecting two

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parts together by ultrasonic welding, wherein one is a flexible liner (6) and the other is a rigid outer casing (32), for the purpose of providing a seal which is mechanically strong and hermetic using a method which is easy to use, rapid, inexpensive, and allows the use of inexpensive materials (col. 2, lines 35-43).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lawrence's invention, such that the valve was attached to the inner lining and the outer casing by ultrasonic welding, as taught by Dabney et al, for the purpose of providing means for permanently attaching the valve to the inner liner and to the outer casing to provide a secure and hermetic attachment that would deter inadvertent tampering or misuse of the fuel contained within Lawrence's fuel cell, by using a method which is easy to use, rapid, inexpensive, and allows the use of inexpensive materials.

6. Claims 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. (U.S. Pub. No. 2002/0197522) in view of Dabney et al. (U.S. Pat. No. 3,795,558) further in view of de Pous et al. (U.S. Pat. No. 6,021,930).

Lawrence et al. discloses the invention as essentially claimed, except for wherein the outer casing comprises at least one ledge and at least one slanted inside wall, and the inner lining comprises at least one snap-fit and at least one barb, and wherein the step of inserting the inner liner and valve into the outer casing further comprises advancing the inner liner until the at least one snap-fit engages with the at least one ledge and until the at least one barb engages with the at least one slanted inside wall.

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De Pous et al. teaches a method of attaching a flexible liner (14, fig. 1,9) to a rigid outer casing (20) wherein the outer casing (30) comprises a ledge (29, fig. 9) and a slanted inside wall (slanted inner wall on 18) and the inner lining (14) comprises a snap-fit (31) and a barb (16), and wherein the inner lining (14) is advanced into the outer casing (30) until the snap-fit (31) engages with the ledge (29) and until the barb (16) engages with the slanted inside wall (slanted inside wall of 18), for the purpose of providing a secure attachment between a flexible liner and a rigid outer casing and for the purpose of providing means that indicate the liner is fully inserted into the outer casing.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lawrence's invention such that the outer casing comprises at least one ledge and at least one slanted inside wall, and the inner lining comprises at least one snap-fit and at least one barb, and wherein the step of inserting the inner liner and valve into the outer casing further comprises advancing the inner liner until the at least one snap-fit engages with the at least one ledge and until the at least one barb engages with the at least one slanted inside wall, as taught by de Pous et al., for the purpose of providing a secure attachment between a flexible liner and a rigid outer casing and for the purpose of providing means that indicate the liner is fully inserted into the outer casing.

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7. Claims 62-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. (U.S. Pub. No. 2002/0197522) in view of Dabney et al. (U.S. Pat. No. 3,795,558) further in view of Hobbs (U.S. Pat. No. 5,244,615).

Lawrence et al. discloses the invention as essentially claimed, except for wherein the inner liner is rendered fuel-resistant by fabricating the inner liner from fluorinated low- density polyethylene.

Hobbs teaches fluorinated low-density polyethylene containers are commonly used for their barrier properties against leakage and resistance of methanol fuel (col. 1, lines 13-20; col. 3, line 63; col. 4, lines 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lawrence et al.'s invention, such that the inner liner is fabricated from a fluorinated low-density polyethylene, as taught by Hobbs, in a manner known in the art to improve a container's resistance to solvents such as methanol.

8. Claims 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVos et al. (U.S. Pub. No. 2005/0079128) in view of Dabney et al. (U.S. Pat. No. 3,795,558).

DeVos et al. disclose a method for sealing a fuel supply (100; fig. 2), wherein the fuel supply comprises a valve (retained in 110 and 108), an outer casing (102) including a first opening (opening through which 110 or 108 pass through casing 102), and an inner liner (118 or 120) including a second opening (opening through which ends of 110 or 108 pass through), the method comprising the steps of:



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inserting the valve (valve body 110) of the fuel supply into the second opening of the inner liner (120);

attaching the valve (110) to the inner liner (120);

securing the inner liner (120) and valve (110) to the outer casing (102) [fig. 2 shows all elements assembled together]; and

attaching the valve (110) to the outer casing (102);

wherein the inner liner is fabricated from polyethylene (para. 0040); and

wherein the fuel is methanol (para. 0019).

However, DeVos does not disclose specifics on how the valve is attached to the liner or the casing, and therefore does not disclose wherein the valve is attached to the inner liner by ultrasonic welding and wherein the valve is attached by heat to the outer casing by ultrasonic welding.

Dabney et al. teach the use of ultrasonic energy for sealing two plastic rigid members together (such as the valve and outer casing) is known in the art and would have been within the technical grasp of a person having ordinary skill to pursue as a means for permanently attaching the valve to the outer casing to provide a secure and hermetic attachment (that would deter inadvertent tampering or misuse of the fuel contained within DeVos's fuel cell), and further teach a method for connecting two parts together by ultrasonic welding, wherein one is a flexible liner (6) and the other is a rigid outer casing (32), for the purpose of providing a seal which is mechanically strong and hermetic using a method which is easy to use, rapid, inexpensive, and allows the use of inexpensive materials (col. 2, lines 35-43).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify DeVos's invention, such that the valve was attached to the inner lining and the outer casing by ultrasonic welding, as taught by Dabney et al, for the purpose of providing means for permanently attaching the valve to the inner liner and to the outer casing to provide a secure and hermetic attachment that would deter inadvertent tampering or misuse of the fuel contained within DeVos's fuel cell, by using a method which is easy to use, rapid, inexpensive, and allows the use of inexpensive materials.

9. Claims 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVos et al. (U.S. Pub. No. 2005/0079128) in view of Dabney et al. (U.S. Pat. No. 3,795,558) further in view of De Pous et al. (U.S. Pat. No. 6,021,930).

DeVos et al. discloses the invention as essentially claimed, except for wherein the outer casing comprises at least one ledge and at least one slanted inside wall, and the inner lining comprises at least one snap-fit and at least one barb, and wherein the step of inserting the inner liner and valve into the outer casing further comprises advancing the inner liner until the at least one snap-fit engages with the at least one ledge and until the at least one barb engages with the at least one slanted inside wall.

De Pous et al. teaches a method of attaching a flexible liner (14, fig. 1,9) to a rigid outer casing (20) wherein the outer casing (30) comprises a ledge (29, fig. 9) and a slanted inside wall (slanted inner wall on 18) and the inner lining (14) comprises a snap-fit (31) and a barb (16), and wherein the inner lining (14) is advanced into the outer

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casing (30) until the snap-fit (31) engages with the ledge (29) and until the barb (16) engages with the slanted inside wall (slanted inside wall of 18), for the purpose of providing a secure attachment between a flexible liner and a rigid outer casing and for the purpose of providing means that indicate the liner is fully inserted into the outer casing.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify DeVos's invention such that the outer casing comprises at least one ledge and at least one slanted inside wall, and the inner lining comprises at least one snap-fit and at least one barb, and wherein the step of inserting the inner liner and valve into the outer casing further comprises advancing the inner liner until the at least one snap-fit engages with the at least one ledge and until the at least one barb engages with the at least one slanted inside wall, as taught by de Pous et al., for the purpose of providing a secure attachment between a flexible liner and a rigid outer casing and for the purpose of providing means that indicate the liner is fully inserted into the outer casing.

10. Claims 62-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVos et al. (U.S. Pub. No. 2005/0079128) in view of Dabney et al. (U.S. Pat. No. 3,795,558) further in view of Hobbs (U.S. Pat. No. 5,244,615).

DeVos et al. discloses the invention as essentially claimed, except for wherein the inner liner is rendered fuel-resistant by fabricating the inner liner from fluorinated low- density polyethylene.

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Hobbs teaches fluorinated low-density polyethylene containers are commonly used for their barrier properties against leakage and resistance of methanol fuel (col. 1, lines 13-20; col. 3, line 63; col. 4, lines 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify DeVos's invention, such that the inner liner is fabricated from a fluorinated low-density polyethylene, as taught by Hobbs, in a manner known in the art to improve a container's resistance to solvents such as methanol.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARINA TIETJEN whose telephone number is (571) 270-5422. The examiner can normally be reached on Mon-Thurs, 9:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBIN EVANS can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. T./  
Examiner, Art Unit 3753

/John K. Fristoe Jr./  
Primary Examiner, Art Unit 3753